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Collegiate Athletic Trainers' Experiences With Work-Family Conflict and Work-Family Guilt Based Upon Organizational Factors

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Context: The collegiate athletic setting has been described as having high workloads and working demands. The extensive time commitment required of athletic trainers working in this setting has been identified as a precursor to work-family conflict (WFC) and work-family guilt (WFG). Although individualized, experiences in the work-life interface can largely be affected by organizational factors (ie, elements specific to the workplace). Staff size and patient load may influence the athletic trainer's feelings of WFC and WFG, yet these factors have not been directly studied.

Objective: To examine organizational factors and experiences of WFC and WFG among collegiate athletic trainers.

Design: Cross-sectional study.

Setting: Collegiate setting.

Patients or Other Participant(s): A total of 615 (females = 391, gender variant or nonconforming = 1, males = 222, preferred not to answer = 1) athletic trainers responded to an online survey. The average age of participants was 33 ± 9 years, and they were Board of Certification certified for 10 ± 8 years. A total of 352 participants (57.2%) worked in National Collegiate Athletic Association Division I, 99 in Division II (16.1%), and 164 in Division III (26.7%).

Main Outcome Measure(s): Participants responded to demographic and workplace characteristic questions (organizational infrastructure, staff size, and number of varsity-level athletic teams). They completed WFC and WFG scales that have been previously validated and used in the athletic trainer population.

Results: Work-family conflict and WFG were universally experienced among our participants, with WFC scores predicting WFG scores. Participants reported more time-based conflict than strain- or behavior-based conflict. No differences in WFC and WFG scores were found among organizational infrastructures. Weak positive correlations were present between staff size and WFC scores and WFG scores. The number of athletic teams was not associated with WFC or WFG scores.

Conclusions: Organizational factors are an important component of the work-life interface. From an organizational perspective, focusing on improving work-life balance for the athletic trainer can help mitigate experiences with WFC and WFG.

Key Words: work-life interface, balance, structural variables

Key Points

- A moderate positive correlation was found between work-family conflict and work-family guilt.
- Work-family conflict predicted work-family guilt among collegiate athletic trainers.
- Work-family conflict and work-family guilt were experienced similarly by collegiate athletic trainers, regardless of their organizational infrastructure. No differences were seen in work-family conflict scores among those working in academic (48 ± 9), athletics (46 ± 11), or medical (46 ± 11) models. Similarly, work-family guilt scores did not differ among those working in academic (4 ± 1), athletics (3 ± 1), or medical (3 ± 1) models.

The collegiate setting is one of the largest employment settings for athletic trainers (ATs).[1] Over time, researchers[2–8] of a large number of workplace-related studies have focused on individuals in this setting. The collegiate setting is described as arduous,[9] and the demands placed upon the AT have led to burnout,[10] work-family conflict (WFC), and job dissatisfaction.[7,8] Job demands are the underpinning to experiences of burnout, conflict, and dissatisfaction. Specifically, these experiences are due to the hours required to perform job duties, as well as working hours that extend into the evening and weekend.[11] The extensive time commitment expected of the AT limits the time available to engage in other life roles, thereby raising concerns about work-life balance.[4–6,12]

The growing concerns for the wellbeing of ATs related to their work-life balance are demonstrated in the National Athletic Trainers' Association (NATA) position statement on the topic.[13] Additionally, the authors of the Strategic Alliance Research Agenda Task Force's publication[14] highlighted the need for more examination of reducing WFC for the AT. *Work-family conflict* is an interrole struggle, in which work and family roles are conjointly discordant; the time and demands of 1 role make it challenging to fulfill the other roles.[15] Since 2005,

investigators[11,16–18] have gained a better sense of this concept, especially within sport organizations, as they are often labeled as demanding and time intensive, which can lead to WFC. Recently, WFC was also associated with work-family guilt (WFG).[2] *Guilt* is defined as an interpersonal or self-evaluative emotion that originates from a person's belief that he or she violated a norm or standard.[2] *Work-family guilt* may result from an individual's perception of being unable to fully engage in roles, activities, or responsibilities viewed as important.[2,19,20] Work-family guilt is related to interrole conflict and may occur when an individual is managing competing work and family roles.[2,20] As a multidimensional construct, WFC has been conceptualized as being influenced by organizational, individual, and sociocultural factors.[11,13] Similarly, the concept of WFG, which may arise from experiences with WFC, is also multifactorial in nature.[19]

Despite the depth of these constructs and the understanding that the work-family paradigm is individualized, organizational factors are important to consider in one's experiences with WFC and WFG. Working hours, the nature of those hours, the importance of being physically present, and the expectations to be available 24 hours a day and 7 days a week (24/7) are common precursors to WFC and WFG in the sport setting.[11,12,16,17] Organizational factors such as working hours, contract length, sport responsibilities, years of employment, and salary are more specific to the individual AT, whereas other factors are more commonly shared across a department. The organizational infrastructure, staff size, and number of varsity-level athletic teams are less subject to fluctuation and will affect all employees in a given workplace. Athletic trainers have little control or influence over these factors; instead, the organization itself has authority and management in these areas.

Although researchers[16,17] examined WFC based on the multidimensional model first described by Dixon and Bruening,[11] organizational and structural variables continue to garner attention, as they are not as negotiable, largely due to the formality of paid work. Some[4,21] have speculated that organizational infrastructure may play a role in experiences of WFC. Most athletic training or sports medicine staffs are structured according to the athletics model, whereby the head AT reports directly to the athletic director.[4] This model has been suggested as unfavorable because it can be dominated by coaching demands and has the potential to negatively affect ATs' quality of life.[4,21] In the medical, or patient-centered, model, the head AT reports to another health care provider, often a medical director or team physician, creating a more favorable reporting structure.[4] The medical director is usually employed by student health services, and campus health services is aligned with athletic training services.[21] This structure has been described as improving ATs' quality of life, workload, and job satisfaction.[22] In the academic model, clinical ATs and athletic training educators are part of the athletic training education program. In this case, individuals often work in a dual role as a professor or educator and AT.[4] This model can also increase experiences with work-life conflict due to greater expectations and job duties as a result of serving in multiple capacities.[6]

Supervisor expectations and training (ie, medical versus nonmedical) can be important within the WFC paradigm. However, evidence is limited regarding the differences among the organizational infrastructures present in collegiate athletic training services. The influence of other rigid factors such as staff size and the number of athletic teams is also crucial for understanding challenges to work-life balance from an organizational perspective. Limited staff resources combined with expectations to care for numerous teams have been identified as problematic.[9] Therefore, the purpose of our study was to examine organizational factors and experiences of WFC and WFG among collegiate ATs. Our goal was to provide descriptive data on the relationships among these factors and constructs. The following hypotheses were used to guide the research:

H_1: The WFC and WFG scores would differ based on organizational infrastructure.
H_2: Staff size would be negatively correlated with WFC and WFG scores.
H_3: The number of varsity-level athletic teams would be positively correlated with WFC and WFG scores.

METHODS

Research Design

Using a cross-sectional design, we sought to understand experiences of WFC and WFG among collegiate ATs. Our goal was to examine the relationship between these constructs and organizational factors in the workplace. Participants were asked to respond to an online survey by using the Qualtrics software program. Before participant recruitment and data collection, this study was approved by the Institutional Review Board at the University of Connecticut. Because the survey was distributed in September 2020, we captured data during a unique timepoint given the ongoing COVID-19 pandemic.

Participants

We recruited collegiate ATs who were employed and practicing clinically in the National Collegiate Athletic Association (NCAA) Division I (DI), DII, and DIII settings. The email addresses for potential participants were obtained by conducting an online search for publicly available athletic training staff information. Initially, a list of NCAA colleges and universities was created, totaling 351 schools in DI, 307 in DII, and 442 in DIII. Each school's athletics website was searched for athletic training staff members. We found email addresses for 3362 DI, 1294 DII, and 1518 DIII ATs. After duplicates and inaccurate addresses were removed, a recruitment email was sent to 6110 ATs. A total of 788 individuals (13% response rate) started the survey and 756 finished it. After we removed those who did not qualify for the survey and incomplete responses, 615 were eligible for analysis (81% completion rate).

Instrumentation

The survey contained demographic questions such as age, gender, and ethnicity to describe our participant population. Participants were also asked to indicate their NATA District membership and years of Board of Certification

(BOC) certification. Questions related to an individual's workplace addressed setting, organizational infrastructure, number of varsity-level teams, number of full- and part-time ATs employed, and hours worked per week. Organizational infrastructure was categorized as an *academic* (clinical ATs and athletic training educators are part of the athletic training education program), *athletics* (part of the athletics department; head AT reports to the athletic director), or *medical* (alignment with student and campus health services; head AT reports to another health care provider) *model*. Two previously validated scales were used to measure WFC[15] and WFG.[19] Additional questions and scales were included in the survey but not analyzed as part of this research.

The WFC scale used in this survey was developed by Carlson et al.[15] The scale consists of 18 items that measure various facets of conflict (ie, time-, strain-, and behavior-based conflict). In addition, the scale contains 2 subscales that measure the bidirectional nature of conflict, namely, work interference with family conflict and family interference with work conflict. *Time-based conflict* can occur when an AT is unable to attend a family or personal event due to work or unable to provide postpractice treatments secondary to a personal commitment. Athletic trainers may experience *strain-based conflict* if they are undergoing emotional stress at work that carries into their home life. The opposite can be true as well if emotional stress at home is affecting an AT in the workplace. For example, this stress may be the case during the COVID-19 pandemic as ATs are experiencing different and, in many cases, increased demands both at home and at work. *Behavior-based conflict* describes the use of behaviors at work for organization and productivity that are not useful at home and vice versa. The WFC scale has been reported to be reliable ($\alpha = .78–.87$)[15] and has been used in the AT population.[3] Participants rated items on a 5-point Likert scale (1 = *strongly disagree*, 5 = *strongly agree*); higher cumulative scores on the scale indicate higher levels of WFC.

A WFG scale developed by Gonalves et al[19] was used to evaluate participant's experiences with guilt. This scale was used to evaluate guilt among collegiate ATs[2] and has also been reported as reliable ($\alpha = .84–.86$).[19] The scale measures perceived WFG bidirectionally. Similar to the WFC scale, the WFG uses 2 subscales, namely, work interference with family guilt (WIFG) and family interference with work guilt. Athletic trainers may experience feelings of guilt when work responsibilities do not allow them to participate in family or personal responsibilities that they view as important. Similarly, ATs may feel guilty if they are unable to be at work for their patients due to a personal obligation. The scale consists of 7 items rated on a 6-point Likert scale (1 = *strongly disagree*, 6 = *strongly agree*). The scores on each item were averaged to determine a total WFG score. Higher average scores indicate higher levels of WFG.

Data-Collection Procedures

Potential recruits were provided information regarding the study and asked to confirm their willingness to participate. Initially, 2 qualifying questions were asked: if at least 50% of their job responsibilities involved working clinically as an AT and in which setting they were currently employed. Eligible volunteers were then asked a series of demographic questions and items related to instruments used to measure WFC and WFG. The data analyzed for this study were part of a larger mixed-methods study. Follow-up reminders were sent at 1 and 3 weeks after the initial email invitation.

Statistical Analyses

All data were downloaded from the survey into an Excel (Microsoft Corp) spreadsheet. The data were cleaned and responses were removed if the qualifying criteria were not met or if individuals did not complete the specified scales in their entirety. All 615 participants completed the WFC scale, but only 582 completed the WFG scale. Data were analyzed using SPSS (version 26; IBM Corp).

Total scores were calculated for each scale used in the survey; the summed total was used for the WFC scale, whereas the average score was used for the WFG scale, as these are the standard methods of scoring each instrument. Frequencies were calculated for gender, ethnicity, NATA district, setting, and organizational infrastructure. Descriptive statistics including mean, SD, and range were calculated for age, years of BOC certification, number of full-time staff, number of part-time staff, total staff size (ie, sum of full- and part-time staff), number of varsity-level teams, and hours worked per week in season. Organizational infrastructure, total staff size, number of varsity-level teams, and average work hours per week during the season were calculated for comparison by setting. Descriptive statistics were also computed for the WFC and WFG scales and related subscales.

We set the a priori significance level at $P < .05$. The Cronbach α was used to determine reliability in our population of ATs for both the WFC and WFG scales. The normality of variables was evaluated using Kolmogorov-Smirnov tests. Data for the WFC scale, WFG scale, staff size, and number of varsity-level teams were nonnormally distributed in our sample. Nonparametric tests were applied because the data did not have a normal distribution. Kruskal-Wallis tests were performed to identify any differences in WFC scores and WFG scores based on organizational infrastructure (ie, academic, athletics, or medical model). Spearman correlations were generated to determine if there was a relationship between staff size and WFC scores, staff size and WFG scores, number of teams and WFC scores, number of teams and WFG scores, staff size and number of teams, and WFC and WFG scores. The following interpretation scale was used for the correlation coefficients: 0.1–0.39 = *weak*, 0.40–0.69 = *moderate*, 0.7–0.89 = *strong*, 0.9–1.0 = *very strong*.[23] Linear regression was calculated to investigate if the number of teams (independent variable) predicted staff size (dependent variable). We generated another linear regression with WFC score as the independent variable and WFG as the dependent variable to identify if WFC predicted WFG.

RESULTS

Participant Demographics

Of the 615 participants who were included in the analyses, 391 identified as female, 222 as male, 1 as gender variant or nonconforming, and 1 preferred not to

Table 1. Participant Demographics

Variable	No. (%)	Mean ± SD	Range
Age, y		33 ± 9	21–70
Board of Certification certification, y		10 ± 8	0–45
Gender			
Female	391 (63.6)		
Male	222 (36.1)		
Gender variant or nonconforming	1 (0.15)		
Prefer not to answer	1 (0.15)		
Ethnicity			
American Indian or Alaskan Native	2 (0.3)		
Asian or Pacific Islander	11 (1.8)		
Black (not of Hispanic origin)	19 (3.1)		
Hispanic	23 (3.7)		
Multiethnic	11 (1.8)		
Other	7 (1.1)		
White	542 (88.1)		
National Athletic Trainers' Association District membership			
1	65 (10.6)		
2	133 (21.6)		
3	89 (14.5)		
4	117 (19.0)		
5	40 (6.50)		
6	26 (4.2)		
7	19 (3.1)		
8	20 (3.3)		
9	81 (13.2)		
10	25 (4.1)		

answer. The average age of our participants was 33 ± 9 years, and they were BOC certified for 10 ± 8 years. Additional participant demographic information can be found in Table 1.

Workplace Characteristics

In total, 352 participants (57.2%) worked in the DI setting, 99 in DII (16.1%), and 164 in DIII (26.7%). An average of 19 ± 6 varsity-level teams were at our participants' schools. As for organizational infrastructure in the workplace, 10 participants worked in an academic model, 513 in an athletics model, and 92 in a medical model. They worked an average of 60 ± 12 hours per week while in season. This information and other workplace characteristics are summarized in Table 2. Additionally, Table 3 provides a breakdown of workplace characteristics by setting.

The WFC and WFG Scores

Cronbach α testing revealed good reliability in our sample for both WFC ($\alpha = 0.88$) and WFG ($\alpha = 0.78$) scores. Scores on the WFC scale averaged 46 ± 11 and ranged from 18 to 79. Scores on the work interference with family conflict subscale (28 ± 7) were higher than on the family interferences with work conflict subscale (18 ± 6). In terms of the specific type of conflict, our participants scored higher for time-based conflict items (17 ± 4) than strain-based conflict (15 ± 5) or behavior-based (14 ± 5) items. The 3 items with the highest scores on the WFC scale were as follows: (1) *I have to miss family activities due to the amount of time I must spend on work responsibilities* (3.72 ± 1.14), (2) *My work keeps me from my family activities more than I would like* (3.69 ± 1.07), and (3) *Due to all the pressures at work, sometimes when I come home, I am too stressed to do the things I enjoy* (3.59 ± 1.25).

Table 2. Organization and Workplace Characteristics

Characteristic	No. (%)	Mean ± SD	Range
National Collegiate Athletic Association division			
I	352 (57.2)		
II	99 (16.1)		
III	164 (26.7)		
Organizational infrastructure			
Academic	10 (1.6)		
Athletics	513 (83.4)		
Medical	92 (15.0)		
Full-time staff		7 ± 5	0–31
Part-time staff		2 ± 3	0–18
Total staff (sum of part time + full time)		9 ± 6	1–37
No. of varsity-level teams		19 ± 6	6–46
Average working hours/wk		60 ± 12	10–100

On the WFG scale, the mean score was 3 ± 1, with a range from 1 to 6. Participants scored higher on the WIFG subscale (4 ± 1) than on the family interference with work guilt subscale (2 ± 1). The 3 highest scored items were all part of the WIFG subscale: (1) *I regret not being around for my family as much as I would like to* (4.75 ± 1.10), (2) *I feel bad[ly] because I frequently have to take time away from my family to deal with issues happening at work* (4.39 ± 1.35), and (3) *I feel guilty for not showing as much interest to my spouse/partner as I wish* (3.97 ± 1.63). A summary of WFC and WFG scores is presented in Table 4.

A significant moderately positive correlation was found between total WFC score and total WFG score ($r = .617$, $P < .001$). Also, the WFC score predicted the WFG score, with $b = .642$, $t_{582} = 20.177$, and $P < .001$. A significant regression equation was present ($F_{1,581} = 407.124$, $P < .001$), with an R^2 of 0.412. A participant's predicted total WFG score was equal to $1.043 + 0.050$ (WFC total score).

Organizational Infrastructure

Kruskal-Wallis testing revealed no difference in WFC scores among the different organizational infrastructures (academic = 48 ± 9, athletics = 46 ± 11, medical = 46 ± 11; $H_2 = 0.434$, $P = .805$). Similarly, testing did not reveal differences in WFG scores among the organizational infrastructures (academic = 4 ± 1, athletics = 3 ± 1,

Table 3. Organization and Workplace Characteristics by National Collegiate Athletic Association Division

	Division		
Characteristic	I	II	III
Organizational infrastructure, No.			
Academic	1	2	7
Athletics	284	88	141
Medical	67	9	16
Staff (mean ± SD)			
Full time	10 ± 5	4 ± 2	7 ± 5
Part time	3 ± 3	1 ± 2	2 ± 3
Total	12 ± 6	5 ± 2	9 ± 6
No. of teams (mean ± SD)	19 ± 6	17 ± 5	21 ± 6
Mean (± SD) working hours/wk	63 ± 11	57 ± 11	52 ± 9

Table 4. Work-Family Conflict and Work-Family Guilt Scores[a]

Scale Items	Mean ± SD
Work-family conflict	46 ± 11
Time-based conflict	17 ± 4
1. My work keeps me from my family activities more than I would like.	3.69 ± 1.07
2. The time I must devote to my job keeps me from participating equally in household responsibilities and activities.	3.27 ± 1.23
3. I have to miss family activities due to the amount of time I must spend on work responsibilities.	3.72 ± 1.14
4. The time I spend on family responsibilities often interfere with my work responsibilities.	2.22 ± 1.05
5. The time I spend with my family often causes me not to spend time in activities at work that could be helpful to my career.	2.01 ± 1.04
6. I have to miss work activities due to the amount of time I must spend on family responsibilities.	1.58 ± 0.83
Strain-based conflict	15 ± 5
7. When I get home from work I am often too frazzled to participate in family activities or responsibilities.	3.02 ± 1.22
8. I am often so emotionally drained when I get home from work that it prevents me from contributing to my family.	3.27 ± 1.30
9. Due to all the pressures at work, sometimes when I come home I am too stressed to do the things I enjoy.	3.59 ± 1.25
10. Due to stress at home, I am often preoccupied with family matters at work.	1.84 ± 0.99
11. Because I am often stressed from family responsibilities, I have a hard time concentrating on my work.	1.74 ± .94
12. Tension and anxiety from my family life often weakens my ability to do my job.	1.63 ± .89
Behavior-based conflict	14 ± 5
13. The problem-solving behaviors I use in my job are not effective in resolving problems at home.	2.34 ± 1.12
14. Behavior that is effective and necessary for me at work would be counterproductive at home.	2.41 ± 1.14
15. The behaviors I perform that make me effective at work do not help me to be a better parent and spouse.	2.36 ± 1.09
16. The behaviors that work for me at home do not seem to be effective at work.	2.43 ± 1.09
17. Behavior that is effective and necessary for me at home would be counterproductive at work.	2.39 ± 1.09
18. The problem-solving behavior that work for me at home does not seem to be as useful at work.	2.33 ± 1.03
Work interference with family guilt subscale (items 1–3, 7–9, 13–15)	28 ± 7
Family interference with work guilt subscale (items 4–6, 10–12, 16–18)	18 ± 6
Work-family guilt	3 ± 1
Work interference with family guilt subscale	4 ± 1
1. I regret not being around for my family as much as I would like to.	4.75 ± 1.10
2. I feel guilty for not being able to take care of my child(ren) as well as I would like to.	3.43 ± 1.76
3. I feel bad because I frequently have to take time away from my family to deal with issues happening at work.	4.39 ± 1.35
4. I feel guilty for not showing as much interest to my spouse or partner as I wish.	3.97 ± 1.63
Family interference with work guilt subscale	2 ± 1
5. I am worried about the quality of my work because I often put my family before my job.	2.25 ± 1.13
6. I regret missing work due to family responsibilities.	2.49 ± 1.37
7. I feel bad because I frequently have to take time away from work to deal with issues happening at home.	1.94 ± 1.04

[a] Items are reproduced in their original format.

medical = 3 ± 1; $H_2 = 0.822$, $P = .663$). Therefore, we rejected H_1.

Staff Size

A Spearman rank-order correlation yielded a statistically significant but weakly positive correlation ($r = 0.124$, $P = .002$) between staff size and total WFC score. Spearman testing also showed a statistically significant but weakly positive correlation ($r = 0.120$, $P = .004$) between staff size and total WFG score. We rejected H_2 as we hypothesized negative, not positive, correlations.

We found another weakly positive correlation between staff size and number of teams ($r = 0.201$, $P < .001$). The number of teams predicted staff size, with $b = .269$, $t_{611} = 6.902$, and $P < .001$. The regression equation was significant ($F_{1,610} = 47.639$, $P < .001$), with an R^2 of .072. The total staff size was equal to 3.492 + 0.307 (number of varsity-level teams).

Number of Varsity-Level Athletic Teams

Spearman correlation testing demonstrated no significant correlation between the number of varsity-level athletic teams and total WFC score ($r = –0.071$, $P = .081$). The same was true for the relationship between the number of teams and total WFG score: $r = –0.018$, $P = .664$. We rejected H_3, as no significant positive correlations were found between these variables.

DISCUSSION

Maintaining a work-life balance is a fluid process, as it varies from person to person as well as over time. For this reason, related constructs such as WFC and WFG are largely based on individual factors. However, organizational components also play a role and can help ATs better achieve balance between their work and personal lives. Therefore, our purpose was to examine the relationships among organizational factors and experiences of WFC and WFG in collegiate ATs.

Organizational factors that promote a healthy work-life balance enable ATs to manage their experiences with WFC and WFG more easily. For example, support in the work environment from other staff members and supervisors can help reduce WFC and WFG.[12,13,18] Thus, we wanted to explore the relationships among staff size, organizational infrastructure, WFC, and WFG. Additionally, some organizational factors are not easily modifiable, such as the number of athletic teams. Each job has its own unique demands and specifications (eg, number of teams, specific sports, and facilities) that must be adapted to and accepted as constraints of the position.[12] Hence, we investigated the

number of varsity-level athletic teams at ATs' workplaces as a possible variable affecting WFC and WFG.

The WFC and WFG Scores

Our participants experienced more conflict and guilt from work interference with family than family interference with work. This finding mimics previous research[2] on WFC and WFG among ATs. Individuals often perceive more strain on their home roles from their work responsibilities than the converse. Therefore, ATs need more support in the workplace to decrease negative spillover into their personal lives. *Spillover* is the negative or positive effect of one role on another.[13] Negative spillover is important to mitigate, as it can lead to feelings of increased tension, irritability, or withdrawal from others that can affect ATs both at home and in the workplace.[24] In turn, this can result in a hostile work environment, inadequate patient care, and attrition from the profession.

Our participants experienced more time-based conflict than strain- or behavior-based conflict. This finding was noted earlier in the AT population.[3] Examining the different types of conflict experienced by ATs will allow us to identify specific strategies to address this concern. For the collegiate AT, working hours and demands are high. Our sample was working an average of 60-hour work weeks during the season. Other authors[12,25] reported that long and atypical working hours were common in the traditional settings for collegiate ATs. Given the high number of working hours and perceived levels of time-based conflict, it is evident that collegiate ATs experience challenges due to the time required to complete their job duties. Organizations and employers play roles in challenging the prominent always available "24/7 mindset" of sport organizations.[11,12,25] Emphasis on the quality of working hours over the quantity of hours may help change the perception of working in collegiate athletics. Additionally, if the 24/7 mindset is changed, ATs may be more likely to remain in the profession due to less conflict and strain and better work-life balance.

Work-family guilt is an individual-level outcome of WFC that results from interrole conflict.[2,20] Feelings of guilt may arise as a response to conflict that occurs when trying to balance intersecting work and personal demands.[26] As such, we can expect that experiences with WFC may lead to feelings of guilt and experiences of WFG among ATs. Thus, it was important to investigate the relationship between WFG and WFC and how WFG may also be affected by organizational factors. In our study, participants' experiences with WFG were predicted by their experiences with WFC. Scores on the WFC scale explained 41% of the variance in scores on the WFG scale. Although they used a different WFC scale, Eason et al[2] also found that WFC predicted WFG in collegiate ATs. Guilt can transpire if an individual has a negative appraisal of his or her ability to meet expectations of the given roles.[27] It can create feelings of regret and a hyperfocus on the consequences of one's actions as the individual views the behavior as wrong.[2] Addressing WFC in the collegiate setting can also affect experiences of WFG.

Organizational Infrastructure

Prior researchers[4–6] have explored organizational infrastructures in the collegiate setting. Our results did not indicate differences among the different organizational structures and demonstrated that WFC and WFG were widely experienced by our participants. Among the organizational infrastructures, those working in an academic model displayed the highest scores on both the WFC (48 $\pm$ 9) and WFG (4 $\pm$ 1) scales. Scores on the WFC (46 $\pm$ 11) and WFG (3 $\pm$ 1) scale for those in the athletic and medical models were identical.

Athletic trainers working in these models may experience WFC and WFG from different sources. In the academic model, role strain and interrole conflict have been cited as challenges due to increased responsibilities and time demands.[6] Role conflict, specifically *intersender conflict*, in which ATs had different expectations and goals than coaches, was also reported in the academic model as well as the medical model.[6] In the athletic model, role overload and role conflict along with staffing concerns have been identified.[5] Although we did not find differences in WFC and WFG across organizational infrastructures, it may be that the differences exist in the antecedents of conflict and guilt. For example, in an academic model, conflict may arise from competing demands between teaching and clinical responsibilities; guilt may arise for similar reasons. In an athletic model, conflict and guilt may be due to working demands, such as a large number of working hours or expectations to be constantly available. Lastly, in a medical model, it is possible that conflict and guilt result from disagreements on operational procedures between the medical director and athletic training staff.

Staff Size

Adequate staff size has been mentioned as an important component in helping ATs maintain work-life balance from an organizational perspective. However, chronic understaffing has also been noted by researchers.[5,9,13] The NATA has developed resources for ATs to determine appropriate staff sizes. For example, the "Appropriate Medical Coverage of Intercollegiate Athletics" worksheet[28] allows ATs to evaluate the level of care currently being provided to student-athletes and the number of ATs needed to provide appropriate medical care. Adequate staff sizes allow for job sharing, which can reduce workloads and create flexibility in the workplace.[9,13]

We found weak positive correlations between staff size and WFC and WFG scores. This result was unexpected, as we anticipated that larger staff sizes would result in decreased scores on the scales. A weakly positive correlation existed between staff size and the number of teams. Yet our regression analysis showed that the number of teams explained a mere 7% of the variance in staff size. This finding indicated that staff size was largely being determined by variables other than the number of teams. Staff size may be based more on the number of student-athletes, rather than the number of teams, because participation can vary from sport to sport. An appropriate number of health care providers is needed to supply the best possible care to student-athletes. If a department is short staffed, not only will the patients suffer in terms of the amount of care that can be provided but the ATs will suffer as well.[9] Inadequate staff can increase job demands, workloads, working hours, and stress, serving as a precursor to work-life imbalance.[9,13]

Number of Varsity-Level Athletic Teams

We did not find a significant correlation between the number of varsity-level athletic teams and WFC or WFG scores as originally hypothesized. However, we did not specifically ask participants the number of teams to which they were primarily responsible for providing sports medicine care. Perhaps a relationship exists between the number of athletes served by the AT rather than the number of teams. Capel[29] found a relationship between burnout and the number of athletes directly under ATs' care. *Burnout*, or psychological, emotional exhaustion from prolonged exposure to stress or consistent overload,[24] can be caused by work-life conflict.[10] A relationship may also be present between sport responsibilities and ATs' levels of WFC and WFG. Providing care for different sports may affect WFC and WFG because of different requirements and responsibilities (eg, working hours, travel, extended trips, practice times, number of athletes, types of injuries, and time of year in season).[30]

Limitations and Future Research

We specifically focused on organizational factors as part of the work-life interface, but many other factors can affect experiences with WFC and WFG. Additional employment factors such as working hours, length of contract, sport responsibilities, years of employment, and salary may provide further insight into ATs' experiences. Most of our respondents worked in an athletics organizational infrastructure and at the DI level, which may have affected our results. Although we asked participants for the number of teams in their athletics programs, we did not ask about the total number of student-athletes. The number of student-athletes ATs serve may provide more appropriate data for understanding workloads and experiences with conflict and guilt.

A limitation to cross-sectional research is that the data are from 1 point in time. This study was conducted in the fall of 2020, during the COVID-19 pandemic. Given the circumstances surrounding COVID-19, many ATs experienced job changes and likely different stresses than under normal circumstances. Therefore, for comparison, this study should be repeated after a return to normal athletic operations, once COVID-19 restrictions are no longer in place. Our study was exploratory in nature in order to provide descriptive data. Further research is warranted and should include additional job settings.

CONCLUSIONS

Experiences with WFC and WFG are highly individualized. However, it was clear they were experienced universally by our participants. Organizational factors play an important role in the work-life interface but are largely out of the control of the individual AT. If ATs continue to experience WFC and WFG as part of organizational factors in the workplace, turnover and attrition in the profession are likely. Athletic trainers in workplace environments that are not conducive to work-life balance may perform more poorly in the workplace and consider leaving their job or the profession as a whole. Hence, a top-down approach focusing on appropriate staffing, working hours, and job expectations may help ATs attain balance and limit their experiences of WFC and WFG.

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